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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/562,987

Applicant(s)

HEHL, KARL

Examiner

SOU MYA DASGUPTA

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/CD)
Paper No(s)/Mail Date 3/4/2010
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Applicant's Response

In the applicant's response for application 10/562,987 dated 2/5/2010, the applicant amended Claims 1-25; added new Claim 26; and argued against all the rejections and objections.

The objections set forth for Claims 1-25 are withdrawn because the applicant properly indented the claims.

The rejections set forth under 35 USC 101 for Claims 15-24 and 25 are withdrawn because the claims recite statutory subject matter.

Claims 1-26 are currently pending and have been considered below. Claims 1, 18, 19, and 26 are independent claims.

Priority

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Failure to provide a certified translation may result in no benefit being accorded for the non-English application.

Claim Objections

Claims 1, 15, and 26 are objected to because of the following informalities:

In Claim 1, the pre-ambble should read:

"A method for interactive control of a plastics material injection molding machine, where, via an input unit, which is provided with actuating fields, operating parameters necessary for an operating sequence of a machine are input, in a form which prompts an operator, into a data processing unit which stores these operating parameters, and subsequently one or more operating sequences are carried out in accordance with the stored operating parameters, the method comprising:

so that the claim reads more clearly and conforms to United States patent practice.

Appropriate correction is required.

Claims 7 and 20 are objected to because of the following informalities:

In Claim 7, the term "whilst" in Line 4 should be amended to — and — so that the claim reads more clearly and conforms to United States patent practice. Claim 20 has the same problem.

Appropriate correction is required.

In Claim 15, the pre-ambble should read:

"An apparatus ~~Apparatus~~ for interactive control of a plastic material injection molding machine, ~~having~~ the apparatus comprising:"

so that the claim reads more clearly and conforms to United States patent practice.

Appropriate correction is required.

In Claim 26, the pre-amble should read:

"A method for interactive control of a plastics material injection molding machine, where, via an input unit, which is provided with actuating fields, operating parameters necessary for an operating sequence of a machine are input, in a form which prompts an operator, into a data processing unit which stores these operating parameters, and subsequently one or more operating sequences are carried out in accordance with the stored operating parameters, , the method comprising:

so that the claim reads more clearly and conforms to United States patent practice.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

15-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 15-24:

In summary, Claim 15 recites an "*apparatus*" comprising a "*data processing unit*" (see Line 3), an "*input unit*" (see Line 4), and a "*data set*" (see Line 10). The "*data processing unit*," the "*input unit*," and the "*data set*" are interpreted as computer software components. Thus, the recited "*apparatus*" is computer software *per se*.

Computer software is not a process, a machine, a manufacture or a composition of matter, as set forth in 35 U.S.C. 101. Accordingly, the claims do not recite statutory subject matter.

Claims 16-24 merely recite additional computer software components and/or functionality of the "*system*." Thus, none of Claims 16-24 recite statutory subject matter.

Applicant may obviate the rejection by cancelling the claims.

Claim 25:

Claim 25 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claim fails to place the invention within one statutory class of invention. In Line 1 of Claim 25, applicant has provided evidence that applicant

intends the "medium" to use signals. As such, the claim is drawn to a form of energy. Energy is not one of the four categories of invention and therefore this one of the four categories of invention and therefore this claim(s) is/are not statutory. Energy is not a series of steps or acts and this is not a process. Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefore not a composition of matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement

Claim 26:

Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the Specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

The claims recite the limitation "**alternative possibilities are visualized as a selected choice based on the operator's input**" [emphasis added] (see Line 19). There is **no** mention in the original Specification of "*selected choices based on the operator's input*" that have "**alternative possibilities.**"

If the examiner has overlooked the portion of the original Specification that describes this feature of the present invention, then Applicant should point it out (by page number and line number) in the response to this Office Action.

The following is a quotation of the **second paragraph** of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-5, 9-13, 15-18, 21-24, and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1:

In Line 7, the limitation recites: "wherein a data set covering basic rules". The recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim. The "wherein" clause is supposed to further define an element of a claim; here, "a data set" is not

further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

In Line 12, the limitation recites: "wherein for manual input and/or for input by means of a manipulator". The recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim. The "wherein" clause is supposed to further define an element of a claim; here, "manual input" and "input by means of a manipulator" are not further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 3:

Claim 3 is rejected under 35 U.S.C. 112, **second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 recites the limitation "wherein the hierarchical navigation surface" in Lines 1-2. However, it is unclear which "hierarchical navigation surface" the claim is referring to because there is no hierarchical navigation surface mentioned previously in the claim. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 4:

In Lines 1-2, the limitation recites: "wherein a parameter region is represented". The recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim. The "wherein" clause is supposed to further define an element of a claim; here, "parameter" is not further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claims 5 and 19:

Claims 5 and 19 are rejected under 35 U.S.C. 112, **second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 recites the limitation "the navigation levels" in Lines 1-2. However, it is unclear which "navigation levels" the claim is referring to because there is no navigation levels mentioned previously in the claim. Therefore, there is insufficient antecedent basis for this limitation in the claim.

In Line 2, the limitation recites: "wherein in addition to the navigation levels, a sequence editor representing the operating sequence". The recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim. The "wherein" clause is supposed to further

define an element of a claim; here, "a sequence editor" is not further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 19 has the same problem.

Claim 6:

In Line 3, the limitation recites: "wherein tapping the sequence symbols". The recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim. The "wherein" clause is supposed to further define an element of a claim; here, "tapping" is not further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Also, Claim 6 recites the limitation "operating sequence comprises sequence symbols and when a sequence symbol is tapped" in lines 1-2.. It is unclear which sequence symbol is being tapped as recited in Claim 6. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 9:

In Lines 1-2, the limitation recites: "wherein favorite fields are preset or are presetable". The recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim. The "wherein" clause is supposed to further define an element of a claim; here, "favorite fields" is not further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 10:

Claim 10 is rejected under 35 U.S.C. 112, **second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 10 recites the limitation "the parameter image" in line 2. However, it is unclear which "parameter image" the claim is referring to because there is no "parameter image" mentioned previously in the claim or in the previous claims. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 11:

In Lines 1-2, the limitation recites: "wherein tables are represented on the surface". The recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim.

The "wherein" clause is supposed to further define an element of a claim; here, "tables" is not further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 12:

In Lines 1-2, the limitation recites: "wherein an editable input diagram". The recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim. The "wherein" clause is supposed to further define an element of a claim; here, "editable input diagram" is not further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 13:

Claim 13 is rejected under 35 U.S.C. 112, **second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 13 recites the limitation "the various directions of axes displacement" in lines 2-3 and "the direction of axes displacement". However, it is unclear which "the various direction of axes" and "the direction of axes" the claim is referring to because there is no "direction of axes" mentioned previously in the claim or

in the previous claims. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 15:

Claim 15 is rejected under 35 U.S.C. 112, **second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In lines 16-18 of Claims 15, the limitation recites "wherein the navigation surface comprises at least three lines or at least three columns of actuating and input fields and is hierarchical from line to line or column to column and comprises a plurality of navigation levels associated with one another." It is unclear whether the input fields are hierarchical (see Claim 1) or is the navigation surface hierarchical. Therefore, the recited phrases are vague and indefinite and are not clearly understood by one of ordinary skill in the art.

In Lines 16-17, there is no noun after "actuating," so it is unclear what is being actuated. Therefore, the recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art.

In Lines 12-15, the limitation recites: "using the data set and as a result, a selected choice, offered to the operator displayed on a surface, of possible input possibilities, based on machine configuration and machine environment, for additional parts of the operating sequence that can be added in a compatible manner into existing parts of the operating sequence" . The recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. The limitation needs to be written in order to alleviate confusion and clarify the subject matter.

Claim 16:

Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 recites the limitation "actuating fields" in line 2. However, it is unclear which "actuating fields" the claim is referring to because there is no "actuating fields" mentioned previously in the claim or in the previous claims. (see 112 2nd Rejection for Claim 15 above). Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "input fields" in line 1. It is unclear which actuating fields are being imaged with respect to "input fields" (see Claim 16, Line 2) or "input fields" (see Claim 15, Line 17). Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 17:

Claim 17 is rejected under 35 U.S.C. 112, **second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 17 recites "The apparatus according to claim 15, wherein the hierarchical navigation surface includes three lines." It is unclear if the navigations fields are hierarchical or if the input fields are hierarchical (see Claim 15). Therefore, the recited phrases are vague and indefinite and are not clearly understood by one of ordinary skill in the art.

Claim 18:

In Lines 1-2, the limitation recites: "wherein a parameter region". The recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim. The "wherein" clause is supposed to further define an element of a claim; here, "parameter region" is not

further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 21:

In Lines 1-2, the limitation recites: "wherein identification means". The recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim. The "wherein" clause is supposed to further define an element of a claim; here, "identification means" is not further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 22:

Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 22 recites the limitation "the user" in line 2. However, it is unclear which "user" the claim is referring to because there is no "user" mentioned previously in the claim or in the previous claims. Therefore, there is insufficient antecedent basis for this limitation in the claim.

In Lines 1-2, the limitation recites: "wherein preset favorite fields or favorite fields that are presettable by the user". The recited phrase is vague and indefinite and is not

clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim. The "wherein" clause is supposed to further define an element of a claim; here, "favorite fields" is not further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

In Lines 2-3, the limitation recites: "said favorite fields". It is unclear if the "said favorite fields" is "preset favorite fields" or "favorite fields that are presettable by the user" as recited in Claim 22. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 23:

In Lines 1-2, the limitation recites: "wherein a linking of the jump keys". The recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim. The "wherein" clause is supposed to further define an element of a claim; here, "linking" is not further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 24:

In Lines 1-2, the limitation recites: "wherein a non-editable graphic representation". The recited phrase is vague and indefinite and is not clearly understood by one of ordinary

skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim. The "wherein" clause is supposed to further define an element of a claim; here, "non-editable graphic representation" is not further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 26:

Claim 26 is rejected under 35 U.S.C. 112, **second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Line 16 of Claim 26 recites "**alternative possibilities are visualized** as a selected choice based on the operator's input" (see emphasis added). The term "**alternative possibilities are visualized**" in claim 26 is a relative term which renders the claim indefinite. The term "**alternative possibilities are visualized**" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Therefore, the recited phrases are vague and indefinite and are not clearly understood by one of ordinary skill in the art.

In Line 6, the limitation recites: "wherein a data set covering basic rules". The recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim. The "wherein"

clause is supposed to further define an element of a claim; here, "a data set" is not further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

In Line 11, the limitation recites: "wherein for manual input and/or for input by means of a manipulator". The recited phrase is vague and indefinite and is not clearly understood by one of ordinary skill in the art because the claims are generally narrative and indefinite, failing to conform with current U.S. practice and does not recite proper steps of a method claim. The "wherein" clause is supposed to further define an element of a claim; here, "manual input" and "input by means of a manipulator" are not further defined, but introduced. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-7, 9-20, and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al (US 6,684,264; Patent Issue Date: Jan 27, 2004; Patent Filing Date: Jun 16, 2000; Assignee: Husky Injection Molding Systems; hereafter Husky) in view of Kandogan (US 6,892,361; Patent Issue Date: May 10, 2005; Patent Filing Date: Jul 6, 2001; Assignee: IBM; hereafter Kandogan) in further view of Driskell (US 6,893,143; Patent Issue Date: April 19, 2005; Patent Filing Date: Dec 18, 2001; hereafter Driskell).

Claim 1:

Choi discloses:

Method for interactive control of a plastics material injection molding machine, where, via an input unit, which is provided with actuating fields, (Col 1, lines 8-17; Figs 2-19 → Choi discloses a plastic molding machine interface in which the user can input data.) operating parameters necessary for an operating sequence of a machine are input, in a form which prompts an operator, (Col 7, line 62 – Col 9, line 25 → Choi discloses a GUI with operating parameters and variables.) into a data

processing unit which stores these operating parameters, and subsequently one or more operating sequences are carried out in accordance with the stored operating parameters, (pre-amble) (Col 4, lines 1-30 → Choi discloses a storage unit.)

wherein a data set covering basic rules of the operating sequence of the machine is recorded in the data processing unit and, by using the data set, as a result, the operator is provided on a surface with visualization of a selected choice of input possibilities, based on a machine configuration and (limitation 1) (Figs 5 -19 → Choi discloses this limitation in that a user can navigate and control a molding machine with a GUI.) a machine environment, for additional parts of the operating sequence that can be added into existing parts of the operating sequence, (limitation 1) (Col 10, line 15 - 36 → Choi discloses this limitation in that the user can add or remove buttons that would suit his desired task.)

wherein for manual input and/or for input by means of a manipulator, the input unit makes available to the operator on the surface a selected choice of actuating fields corresponding to the additional parts of the operating sequence and (limitation 2) (Col 10, line 15 - 36 → Choi discloses this limitation in that the user can add or remove buttons that would suit his desired task.)

Choi discloses *hierarchical navigation buttons*. (Col 9, lines 30 – 39)

Choi does not expressly disclose:

a machine environment, for additional parts of the operating sequence that can be added in a compatible manner into existing parts of the operating sequence,
(limitation 1)

input fields is hierarchical from line to line or column to column, and is represented on the surface with a plurality of navigation levels associated with one another. (limitation 3)

Kandogan discloses:

a machine environment, for additional parts of the operating sequence that can be added in a compatible manner into existing parts of the operating sequence,
(limitation 1) (Abstract and Figs 5-7 → Kandogan discloses this limitation in that the system aids the user in a process of matching connector and attachment pieces through the use of matching colors and images. The examiner notes that "compatible manner" is functionally equivalent to matching connector parts.)

input fields is hierarchical from line to line or column to column, and is represented on the surface with a plurality of navigation levels associated with one another. (limitation 3) (Figs 5 and 6 → Kandogan discloses this limitation in that

each leaf of the tree is functionally equivalent to a column. The tree is also hierarchically arranged from parent node (furthest left column) to child nodes (furthest right column).)

for the purpose of providing "eliminating repetitions by reusing existing structure unlike wizard approaches [and supporting] novice users in planning and performing their tasks" (see Col 2, Lines 47-59)..

Choi and Kandogan do not appear to explicitly disclose:

for navigation on a navigation surface statically arranged on the surface, wherein the navigation surface comprising at least three lines or three columns of actuating (limitation 3)

Driskell discloses:

for navigation on a navigation surface statically arranged on the surface, wherein the navigation surface comprising at least three lines or three columns of actuating and (Fig 2E1 – 2H2 → Driskell discloses a GUI with multiple columns and Lines.)

for the purpose of "[permitting] more rapid target acquisition than traditional toolbars."
(see Col 13, Lines 50-52).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system, disclosed in Choi, to include:

a machine environment, for additional parts of the operating sequence that can be added in a compatible manner into existing parts of the operating sequence, (limitation 1)

input fields is hierarchical from line to line or column to column, and is represented on the surface with a plurality of navigation levels associated with one another. (limitation 3)

for navigation on a navigation surface statically arranged on the surface, wherein the navigation surface comprising at least three lines or three columns of actuating (limitation 3)

for the purpose of eliminating repetitions by reusing existing structure unlike wizard approaches [and supporting] novice users in planning and performing their tasks and permitting more rapid target acquisition than traditional toolbars, as taught by Choi.

Claim 2:

Choi, Kandogan, and Driskell disclose the limitations of Claim 1.

Choi also discloses:

the actuating fields are imaged as input fields. (Figs 5 -10 → Choi discloses input fields that control a molding machine.)

Claim 3:

Choi, Kandogan, and Driskell disclose the limitations of Claim 1.

Choi does not appear to expressly disclose

the hierarchical navigation surface is represented with three lines.

Kandogan discloses:

the hierarchical navigation surface is represented with three lines. (limitation 3)

(Figs 5 and 6 →Kandogan discloses this limitation in that each leaf of the tree is functionally equivalent to a column. The tree is also hierarchically arranged from parent node (furthest left column) to child nodes (furthest right column). In the figures, the tree is connected by lines.)

for the purpose of providing "eliminating repetitions by reusing existing structure unlike wizard approaches [and supporting] novice users in planning and performing their tasks" (see Col 2, Lines 47-59)..

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system, disclosed in Choi, to include:

the hierarchical navigation surface is represented with three lines.

for the purpose of eliminating repetitions by reusing existing structure unlike wizard approaches [and supporting] novice users in planning and performing their tasks and permitting more rapid target acquisition than traditional toolbars, as taught by Choi.

Claim 4:

Choi, Kandogan, and Driskell disclose the limitation of Claim 1.

Choi also discloses:

a parameter region is represented on the surface for numeric and/or graphic representation of operating parameters. (Fig 5 → Choi discloses a GUI with input parameters.)

Claim 5:

Choi, Kandogan, and Driskell disclose the limitation of Claim 1.

Choi also discloses:

in addition to the navigation levels, a sequence editor representing the operating sequence in a schematic manner is represented on the surface.. (Col 9, lines 30 –

39 → Choi discloses this limitation in that the operating sequence has hierarchical buttons.)

Claim 6:

Choi, Kandogan, and Driskell disclose the limitation of Claim 1.

Choi also discloses:

the operating sequence comprises sequence symbols and when a sequence symbol is tapped, parameter images associated with the sequence symbol are displayed on the respective navigation level. (Fig 16 and 17 → Choi discloses an operating sequence.)

Claim 7:

Choi, Kandogan, and Driskell the limitation of Claim 1.

Choi also discloses:

the navigation levels comprise at least one top navigation level and at least one bottom navigation level and when three navigation levels are provided, the at least one top navigation level is represented symbolically in one line, whilst the at least one bottom navigation level is represented completely in the additional lines. (Fig 5 → Choi discloses this limitation in that 1 set of buttons are on the top row of the GUI and 2 sets of buttons are presented on the 2 bottom rows of the GUI.)

Claim 9:

Choi, Kandogan, and Driskell disclose the limitation of Claim 1.

Choi also discloses:

favorite fields are preset or are presettable on the surface by the user and when actuated the favorite fields lead to a jump, independent of the navigation, to a preset or presettable parameter group. (Col 10, line 15 - 36 → Choi discloses this limitation in that the user can add or remove buttons that would suit his desired task. Col 11, lines 15-26 → Choi discloses a short-cut button in order a single button can do multiple processes.)

Claim 10:

Choi, Kandogan, and Driskell disclose the limitation of Claim 9.

Choi also discloses:

when the favorite field is actuated, the parameter image edited last in the associated parameter group is displayed. (Col 10, line 15 - 36 → Choi discloses this limitation in that the user can add or remove buttons that would suit his desired task. Col 11, lines 15-26 → Choi discloses a short-cut button in order a single button can do multiple processes. If the user adds and saves the button , even when he does this last, then the button will show up under favorites.)

Claim 11:

Choi, Kandogan, and Driskell disclose the limitation of Claim 1.

Choi also discloses:

tables are represented on the surface for inputting operating parameters and wherein, from these, a preferably non-editable graphic representation of the required values converted therefrom is generated. (Col 9, line 40-61 → Choi discloses “non-editable graphic representation” in that factory pre-set control buttons are available for use.)

Claim 12:

Choi, Kandogan, and Driskell disclose the limitation of Claim 1.

Choi also discloses:

an editable input diagram is represented on the surface. (Col 10, line 15 - 36 → Choi discloses this limitation in that the user can add or remove buttons that would suit his desired task.)

Claim 13:

Choi, Kandogan, and Driskell disclose the limitation of Claim 12.

Choi also discloses:

the representation of the input of the operating parameters for the various directions of axes displacement is effected in the direction of axes displacement.

(Fig 5 → Choi discloses this limitation in that buttons are featured on the x-axis and the y-axis.)

Claim 14:

Choi, Kandogan, and Driskell disclose the limitation of Claim 1.

Choi also discloses:

the method is carried out on a cyclically operating plastics material injection molding machine. (Col 1, line 65 – 67 → Choi discloses “cyclically” in that the system can be designed to assign several functions to a single button for simultaneous actuation. Therefore, the single button could be programmed to the same task multiple times.)

Claim 15:

Claim 15 corresponds to Claim 1.

Claim 16:

Claim 16 corresponds to Claim 2.

Claim 17:

Claim 17 corresponds to Claim 3.

Claim 18:

Claim 18 corresponds to Claim 4.

Claim 19:

Claim 19 corresponds to Claim 5.

Claim 20:

Claim 20 corresponds to Claim 7.

Claim 22:

Claim 22 corresponds to Claim 9.

Claim 23:

Claim 23 corresponds to Claim 10.

Claim 24:

Claim 24 corresponds to Claim 11.

Claim 25:

Claim 25 corresponds to Claim 1.

Claim 26:

Claim 26 corresponds to Claim 1.

Claims 8 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al (US 6,684,264; Patent Issue Date: Jan 27, 2004; Patent Filing Date: Jun 16, 2000; Assignee: Husky Injection Molding Systems; hereafter Husky) in view of Kandogan (US 6,892,361; Patent Issue Date: May 10, 2005; Patent Filing Date: Jul 6, 2001; Assignee: IBM; hereafter Kandogan) in further view of Driskell (IS 6,883,143; Patent Issue Date: April 19, 2005; Patent Filing Date: Dec 18, 2001; hereafter Driskell) in further view of Bannai et al (US 4,674,053; Patent Issue Date: June 16, 1987; Assignee: Toshiba; hereafter Bannai).

Claim 8:

Choi, Kandogan, and Driskell disclose the limitation of Claim 1.

Choi also discloses:

the operating sequence comprises sequence symbols (Fig 5) and tapping the sequence symbols leads to the representation of a relevant parameter region. (Fig 5)

Choi and Wical do not appear to explicitly disclose:

in the event of an alarm, the sequence symbols of the operating sequence relating to the alarm are identified

Bannai discloses:

in the event of an alarm, the sequence symbols of the operating sequence relating to the alarm are identified (Col 4, line 63 – Col 5, line 20 → Bannai discloses an alarm.)

for the purpose of “[providing] a principal object of this invention to provide an improved control system for an injection molding machine capable of eliminating various defects” (Col 2, Lines 25-30).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system, disclosed in Choi, to include:

in the event of an alarm, the sequence symbols of the operating sequence relating to the alarm are identified

for the purpose of providing eliminating repetitions by reusing existing structure unlike wizard approaches [and supporting] novice users in planning and performing their tasks and permitting more rapid target acquisition than traditional toolbars and providing a principal object of this invention to provide an improved control system for an injection molding machine capable of eliminating various defects, as taught by Choi.

Claim 21:

Claim 21 corresponds to Claim 8.

Claims 1-7, 9-20, and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al (US 6,684,264; Patent Issue Date: Jan 27, 2004; Patent Filing Date: Jun 16, 2000; Assignee: Husky Injection Molding Systems; hereafter Husky) in view of Bartz et al (US 6,959,421; Patent Issue Date: Oct 25, 2005; Patent Filing Date: Nov 9, 2001;; Assignee: Cypress Semiconductor Corp.; hereafter Bartz) in further view of Driskell (US 6,883,143; Patent Issue Date: April 19, 2005; Patent Filing Date: Dec 18, 2001; hereafter Driskell).

Claim 1:

Choi discloses:

Method for interactive control of a plastics material injection molding machine, where, via an input unit, which is provided with actuating fields, (Col 1, lines 8-17; Figs 2-19 → Choi discloses a plastic molding machine interface in which the user can input data.) operating parameters necessary for an operating sequence of a machine are input, in a form which prompts an operator, (Col 7, line 62 – Col 9, line 25 → Choi discloses a GUI with operating parameters and variables.) into a data processing unit which stores these operating parameters, and subsequently one or more operating sequences are carried out in accordance with the stored operating parameters, (pre-amble) (Col 4, lines 1-30 → Choi discloses a storage unit.)

wherein a data set covering basic rules of the operating sequence of the machine is recorded in the data processing unit and, by using the data set, as a result, the operator is provided on a surface with visualization of a selected choice of input possibilities, based on a machine configuration and (limitation 1) (Figs 5 -19 → Choi discloses this limitation in that a user can navigate and control a molding machine with a GUI.) a machine environment, for additional parts of the operating sequence that can be added into existing parts of the operating sequence, (limitation 1) (Col 10,

line 15 - 36 → Choi discloses this limitation in that the user can add or remove buttons that would suit his desired task.)

wherein for manual input and/or for input by means of a manipulator, the input unit makes available to the operator on the surface a selected choice of actuating fields corresponding to the additional parts of the operating sequence and
(limitation 2) (Col 10, line 15 - 36 → Choi discloses this limitation in that the user can add or remove buttons that would suit his desired task.)

Choi discloses *hierarchical navigation buttons*. (Col 9, lines 30 – 39)

Choi does not expressly disclose:

a machine environment, for additional parts of the operating sequence that can be added in a compatible manner into existing parts of the operating sequence,
(limitation 1)

input fields is hierarchical from line to line or column to column, and is represented on the surface with a plurality of navigation levels associated with one another. (limitation 3)

Bartz discloses:

a machine environment, for additional parts of the operating sequence that can be added in a compatible manner into existing parts of the operating sequence, (limitation 1) (Col 9 Line 1 - Col 10 Line 67 → Kandogan discloses this limitation in that the elements A3 and A4 can be observed to be associated with subtasks of a task associated with element A. In other words, A3 and A4 are compatible with A, and this allows easier selection by the user.)

input fields is hierarchical from line to line or column to column, and is represented on the surface with a plurality of navigation levels associated with one another. (limitation 3) (Fig 6, Fig 4; Col 9, Lines 34-53) →Kandogan discloses this limitation in that the tasks associated with the second toolbar are subtasks of larger tasks associated with elements of the first toolbar.)

for the purpose of "[suggesting] an order for performing tasks, guiding the user through the tasks with the need for a help utility such as a wizard" (see Abstract).

Choi and Bartz do not appear to explicitly disclose:

for navigation on a navigation surface statically arranged on the surface, wherein the navigation surface comprising at least three lines or three columns of actuating (limitation 3)

Driskell discloses:

for navigation on a navigation surface statically arranged on the surface, wherein the navigation surface comprising at least three lines or three columns of actuating and (Fig 2E1 – 2H2 → Driskell discloses a GUI with multiple columns and Lines.)

for the purpose of "[permitting] more rapid target acquisition than traditional toolbars."
(see Col 13, Lines 50-52).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system, disclosed in Choi, to include:

a machine environment, for additional parts of the operating sequence that can be added in a compatible manner into existing parts of the operating sequence, (limitation 1)

input fields is hierarchical from line to line or column to column, and is represented on the surface with a plurality of navigation levels associated with one another. (limitation 3)

**for navigation on a navigation surface statically arranged on the surface,
wherein the navigation surface comprising at least three lines or three
columns of actuating (limitation 3)**

for the purpose of suggesting an order for performing tasks, guiding the user through the tasks with the need for a help utility such as a wizard and permitting more rapid target acquisition than traditional toolbars, as taught by Choi.

Claim 2:

Choi, Bartz, and Driskell disclose the limitations of Claim 1.

Choi also discloses:

the actuating fields are imaged as input fields. (Figs 5 -10 → Choi discloses input fields that control a molding machine.)

Claim 3:

Choi, Bartz, and Driskell disclose the limitations of Claim 1.

Choi does not appear to expressly disclose

the hierarchical navigation surface is represented with three lines.

Bartz discloses:

the hierarchical navigation surface is represented with three lines. (limitation 3)

(Figs 4 → Bartz discloses multiple rows and columns that comprise of user selectable icons to perform a task.)

for the purpose of "[suggesting] an order for performing tasks, guiding the user through the tasks with the need for a help utility such as a wizard" (see Abstract).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system, disclosed in Choi, to include:

the hierarchical navigation surface is represented with three lines.

for the purpose of suggesting an order for performing tasks, guiding the user through the tasks with the need for a help utility such as a wizard and permitting more rapid target acquisition than traditional toolbars, as taught by Choi.

Claim 4:

Choi, Bartz, and Driskell disclose the limitation of Claim 1.

Choi also discloses:

a parameter region is represented on the surface for numeric and/or graphic representation of operating parameters. (Fig 5 → Choi discloses a GUI with input parameters.)

Claim 5:

Choi, Bartz, and Driskell disclose the limitation of Claim 1.

Choi also discloses:

in addition to the navigation levels, a sequence editor representing the operating sequence in a schematic manner is represented on the surface.. (Col 9, lines 30 – 39 → Choi discloses this limitation in that the operating sequence has hierarchical buttons.)

Claim 6:

Choi, Bartz, and Driskell disclose the limitation of Claim 1.

Choi also discloses:

the operating sequence comprises sequence symbols and when a sequence symbol is tapped, parameter images associated with the sequence symbol are displayed on the respective navigation level. (Fig 16 and 17 → Choi discloses an operating sequence.)

Claim 7:

Choi, Bartz, and Driskell the limitation of Claim 1.

Choi also discloses:

the navigation levels comprise at least one top navigation level and at least one bottom navigation level and when three navigation levels are provided, the at least one top navigation level is represented symbolically in one line, whilst the at least one bottom navigation level is represented completely in the additional lines. (Fig 5 → Choi discloses this limitation in that 1 set of buttons are on the top row of the GUI and 2 sets of buttons are presented on the 2 bottom rows of the GUI.)

Claim 9:

Choi, Bartz, and Driskell disclose the limitation of Claim 1.

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Choi, Bartz, and Driskell disclose the limitation of Claim 1.

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tables are represented on the surface for inputting operating parameters and wherein, from these, a preferably non-editable graphic representation of the required values converted therefrom is generated. (Col 9, line 40-61 → Choi discloses "non-editable graphic representation" in that factory pre-set control buttons are available for use.)

Claim 12:

Choi, Bartz, and Driskell disclose the limitation of Claim 1.

Choi also discloses:

an editable input diagram is represented on the surface. (Col 10, line 15 - 36 →

Choi discloses this limitation in that the user can add or remove buttons that would suit his desired task.)

Claim 13:

Choi, Bartz, and Driskell disclose the limitation of Claim 12.

Choi also discloses:

the representation of the input of the operating parameters for the various directions of axes displacement is effected in the direction of axes displacement.

(Fig 5 → Choi discloses this limitation in that buttons are featured on the x-axis and the y-axis.)

Claim 14:

Choi, Bartz, and Driskell disclose the limitation of Claim 1.

Choi also discloses:

the method is carried out on a cyclically operating plastics material injection molding machine. (Col 1, line 65 – 67 → Choi discloses “cyclically” in that the system can be designed to assign several functions to a single button for simultaneous actuation. Therefore, the single button could be programmed to the same task multiple times.)

Claim 15:

Claim 15 corresponds to Claim 1.

Claim 16:

Claim 16 corresponds to Claim 2.

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Claim 26 corresponds to Claim 1.

Claims 8 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al (US 6,684,264; Patent Issue Date: Jan 27, 2004; Patent Filing Date: Jun 16, 2000; Assignee: Husky Injection Molding Systems; hereafter Husky) in view of Kandogan (US 6,892,361; Patent Issue Date: May 10, 2005; Patent Filing Date: Jul 6, 2001; Assignee: IBM; hereafter Kandogan) in further view of Driskell (IS 6,883,143; Patent Issue Date: April 19, 2005; Patent Filing Date: Dec 18, 2001; hereafter Driskell) in further view of Bannai et al (US 4,674,053; Patent Issue Date: June 16, 1987; Assignee: Toshiba; hereafter Bannai).

Claim 8:

Choi, Bartz, and Driskell disclose the limitation of Claim 1.

Choi also discloses:

the operating sequence comprises sequence symbols (Fig 5) and tapping the sequence symbols leads to the representation of a relevant parameter region. (Fig 5)

Choi and Wical do not appear to explicitly disclose:

in the event of an alarm, the sequence symbols of the operating sequence relating to the alarm are identified

Bannai discloses:

in the event of an alarm, the sequence symbols of the operating sequence relating to the alarm are identified (Col 4, line 63 – Col 5, line 20 → Bannai discloses an alarm.)

for the purpose of “[providing] a principal object of this invention to provide an improved control system for an injection molding machine capable of eliminating various defects” (Col 2, Lines 25-30).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system, disclosed in Choi, to include:

in the event of an alarm, the sequence symbols of the operating sequence relating to the alarm are identified

for the purpose of suggesting an order for performing tasks, guiding the user through the tasks with the need for a help utility such as a wizard and permitting more rapid target acquisition than traditional toolbars, and providing a principal object of this invention to provide an improved control system for an injection molding machine capable of eliminating various defects, as taught by Choi.

Claim 21:

Claim 21 corresponds to Claim 8.

Response to Arguments

Claims 15-25 under 35 USC 101:

Claims 15-24:

With respect to Claim 15-24, the applicant argues that 35 USC 101 is improper and should be withdrawn. More specifically in claim 25, for purposes of examination, the examiner interprets “*apparatus*” to be software because “*a data processing unit*” (see Line 3), “*an input unit*” (see Line 3), “*a data set*” (see Lines 12 and 14), and “*a navigation surface*” (see Line 19) are all software elements; thus, the “*apparatus*” is computer software *per se*.

The applicant may amend Claim 15 to expressly recite at least one computer hardware component to obviate the 35 USC 101 rejection. The examiner notes that the “*navigation surface*” recited in Claim 15 is interpreted as a graphical user interface (see Specification - Figure 2 and the corresponding description). If the examiner has overlooked the portion of the original Specification that describes the recited “*apparatus*” as comprising at least one computer hardware component, then Applicant should point it out (by page number and line number) in the response to this Office Action.

Claim 25:

With respect to Claim 25, the applicant argues that 35 USC 101 is improper and should be withdrawn. For purposes of examination, the examiner interprets "data carrier" to include energy or signals because the Specification does not clearly define a "data carrier" as non-volatile forms of memory or hardware. If the examiner has overlooked the portion of the original Specification that describes this feature of the present invention, then Applicant should point it out (by page number and line number) in the response to this Office Action.

Claims 1-26 under 35 USC 103:

The applicant argues that the prior art does not disclose the limitations of independent Claims 1, 15, 25, and 26. Applicant's arguments with respect to claims 1, 15, 25, and 26 have been considered but are moot in view of the new ground(s) of rejection.

Claims 2-14 and 16-24 are dependent on independent Claims 1 and 15 respectively; claims 2-14 and 16-24 (dependent claims) are rejected because the prior art reads on the claim limitations with respect to the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SOUMYA DASGUPTA whose telephone number is

(571)272-7432. The examiner can normally be reached on M-Th 9am-7pm, F 9am-1pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on 571-272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SD

/DOUG HUTTON/
Supervisory Patent Examiner, Art Unit 2176